



Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – SEPTEMBER 2006

Moldy breast fillets?

Poultry processors have complained in recent years about a fresh meat (boneless and skinless breast and thigh) spoilage problem that is uniquely characterized by white spots on surface of the muscle with sour or sulfur-like odor. These white spots are often described as “ground parmesan cheese sprinkled over the fillets”, giving the product a “moldy” appearance. *Pseudomonas*, the common product spoilage organism, is ruled out as contributing bacteria. Dr. Scott Russell from the University of Georgia attributes the problem to the overgrowth of acid tolerant bacteria *Lactobacilli* and yeasts in the processing and packaging environment. A number of factors may be contributing to this problem:



1. Increasing load into the plant: Increased use of acidifiers during live production (i.e., on the litter, in the feed and drinking water, especially during feed withdrawal) shifts the microbial composition of the incoming load in favor of acid tolerant bacteria.

2. *Lactobacilli* niches and biofilms in product contact surfaces: Increased water acidification (to enhance chlorine effectiveness) and the use of CO₂ during raw product marination (as a snow) and in packaging (dry ice; gas flushing and vacuum packaging), creates anaerobic conditions favoring the growth of acid tolerant *Lactobacilli* and yeast.

3. Plant air quality and flow patterns: Yeasts can be airborne and brought into the processing and packaging areas via plant airflow. Close proximity of the plant to the row crops (corn), feed mills, fruit orchards or fruit packaging areas, and changes in air flow patterns (negative pressure in the deboning and packing areas) can result in large quantities of yeasts pulled into the processing environment..



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